Systat 13

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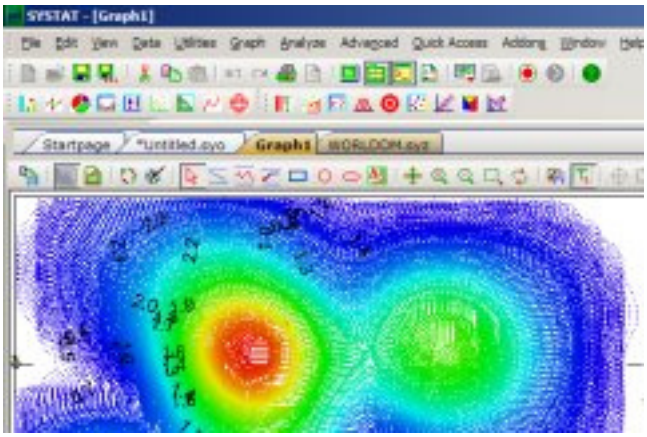

Systat continues to evolve in both capability and usability. It was never short of the former, always occupying an undisputed slot in the top rank of statistical software systems, but the past half-dozen versions have wrought a sea change in its user interface, which continues to develop.

In the latest release (the 13th), the headline news is the availability of bundled exact tests, courtesy of Cytel. I say ‘availability’, because this is an optional add-on, not an inboard addition to Systat itself. Nevertheless, if chosen, it is fully-integrated to act on data in Systat’s worksheet from Systat’s menu structure. Exact tests are, of course, in all but the most trivial cases, among the most highly-demanding of applications, and there is no guarantee that hardware will be up to the challenge. A 32-bit installation under Windows XP with 2MB of RAM frequently ran into memory problems; the difference at 4MB was compelling. RAM is cheap, these days, and pushing up the installed total should be seen as a priority for anyone taking up this powerful option.

Back in Systat itself, core statistics see the sort of progressive extension across the board, which you would expect in an upgrade, while the interface and organisation also continue to evolve. Roughly two dozen additions (depending on how you count them - you may see a few less or considerably more) include four new nonparametric tests for pairwise comparison, control vs treatments and ordered differences, and there are local gains such as a significant speed increase for mixed models methods. Time series gain ARCH and GARCH methods, and Hotelling’s one and two sample tests arrive for multivariate mean hypotheses. Even the basic statistics module sees a quartet of additions (interquartile range, sample mode, SE and CI for trimmed or Winsorised mean) and, more powerfully, the opportunity to access and make use of a range of environment variables. Mean and variance hypothesis tests gain bootstrapped p-values throughout.

There are also a range of modifications at a more subtle level such as temporary local factor categorisation during ANOVA, increased logistic regression control sophistication, and an execution speed increase in mixed models.

Data handling moves forward alongside analysis in a variety of ways, as do the command structure (which now has nested macro definitions), the graphics, and the output regime. The overall move to environment tailoring includes extended localisation options.

Systat's ongoing metamorphosis from the sparse minimalism of yesteryear to rich exploratory environment continues. Toolbar and theme behaviours increasingly fall into line with generic Windows conventions. Data can now be dragged and dropped into (though not yet out of) Systat's data editor, with the necessary import dialogue opening automatically. The new ability to access data semantically through a Business Objects Universe is not a move away from scientific computing, but rather a broadening and democratisation of access to it.

Progress often carries the risk of obsolescence for work done in older versions, so I was particularly pleased to discover options that allow running of command files from version 11 onwards. This is not an absolutely bulletproof solution, but it does eliminate the overwhelming majority of problems, and usually renders remaining difficulties trivial.

An emerging issue in computing tools of most types is how well they scale across the diversifying range of user platforms in common use. I mentioned, above, the demanding nature of exact methods and the benefits of increased RAM; Systat itself, however, remains agile on a one gigabyte, Atom-based web book. At the other end of the scale, the 64-bit implementation makes good use of a suitable environment, especially under Windows 7.

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